

ABSTRACT OF THE DISCLOSURE

A voltage regulation module and system for an integrated circuit die. The voltage regulation module includes an interposer situated in a stack between a substrate and the integrated circuit die. The interposer includes a hybrid array of voltage regulation elements for receiving voltage from the power supply and for down-converting the voltage from the power supply into a regulated voltage supplied to the integrated circuit die. The hybrid array of voltage regulation elements includes both high-bandwidth linear regulation elements for providing voltage regulation to areas on the integrated circuit die that intermittently demand relatively high current levels, and low-bandwidth switching regulator elements that are highly power efficient.

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